# Doctor-patient Relations in the Treatment of RVO

Attention to patients' needs can help design the best treatment regimen.

BY MICHAEL A. SINGER, MD

Macular edema due to retinal vein occlusion (RVO) is a common cause of visual loss in our patients.[1] In contemporary retina practice, as we care for patients with a wide variety of lifestyles, preferences, and professional demands, we must ensure that patients' needs and desires are considered when we design our treatment regimens.

Our treatment decisions should take patients' concerns into account. Some patients with RVO may be more interested in achieving the best vision possible, while others may be willing to tolerate slightly worse vision—although still improved from their current situation—in order to avoid frequent injections. By asking pertinent questions, listening to our patients, and offering our own clinical insights along with data from the latest clinical trials, we can arrive at the best treatment solution for each of our patients with RVOs.

## CLINICAL PARAMETERS

I make treatment recommendations to patients with RVO based on three essential parameters: the presenting visual acuity in the affected eye, the status of the fellow eye, and the age of the patient. In younger patients, those in whom the other eye is healthy, and those with better presenting visual acuity, I will be more inclined to observe and delay treatment. On the other hand, in a patient who has had previous disease in the fellow eye, I am more likely to be aggressive and treat sooner because this patient will understand more clearly the perils involved in having disease and limited vision.

If I decide to observe, the patient usually returns in 3 to 4 weeks. During the follow-up visit I look for changes in the patient's status in three areas: increase in macular thickness on optical coherence tomography (OCT), decrease in visual acuity, or a decrease in the patient's perception of his or her vision. If any two of these three attributes change, I am more likely to recommend treatment. Pointing out to patients that there has been progression, whether subjective or objective, helps them to understand and accept the need for treatment.

When treatment is called for, I rarely treat on the spot. I bring the patient back, even if the appointment is later the same week. I do this to allow patients to get over what I call "sticker shock"—the shock that I am going to have to stick a needle in their eye. Obviously patients feel apprehension regarding this, and they need time to digest the news, talk to their family, ask any questions about the treatment, arrange for a ride, and take care of other personal matters.

## MONOTHERAPY OR COMBINATION THERAPY

My recommendation for treatment depends on patient preferences. I offer the choice of monotherapy or combination therapy and explain the advantages and disadvantages of each.

I explain that monotherapy with a vascular endothelial growth factor (VEGF) inhibitor has been shown to reduce macular edema and improve visual acuity in both central and branch RVO (CRVO and BRVO). In the BRAVO study,[2] patients with BRVO gained a mean 16 to 18 letters of visual acuity from baseline after six monthly intravitreal injections of ranibizumab (Lucentis, Genenetch). In the CRUISE study,[3] patients with CRVO gained a mean 13 to 15 letters from baseline with the same monthly regimen.

With as-needed (PRN) treatment in the second 6 months of the study, visual acuity was well maintained. I tell them that for the best possible visual results, monthly monotherapy with ranibizumab is the way to go.

We also discuss the dexamethasone intravitreal implant (Ozurdex, Allergan). I explain that in the GENEVA study,[4] patients with macular edema due to either BRVO or CRVO who received the implant were more likely to improve by three lines of visual acuity or more at 30 to 90 days post-implant than patients who received sham treatment. Twenty percent to 30% of treated patients gained 3 or more lines within 1 or 2 months, compared with 7% to 12% of sham treated patients.

When discussing the implant, I recommend combination therapy using an anti-VEGF agent (preferably ranibizumab) plus the steroid implant. In our practice, we have found that a combination of VEGF inhibition and the dexamethasone implant seems to have a synergistic effect. I tell patients that in my experience, which I presented last year at the American Society of Retina Specialists meeting,[5] with the combination of an anti-VEGF agent and a dexamethasone implant, macular edema resolves quickly, vision improves, and the effect lasts for approximately 16 weeks.

With the combined treatment, therefore, patients will most likely need six injections over the course of a year, whereas with monotherapy they will need approximately 10 injections.

This is where the patient's lifestyle needs and preferences come into play. If patients will have logistical difficulty attending monthly visits, if they live a great distance away, if they have trypanophobia (fear of needles) and do not want frequent injections, they may prefer combination therapy, and I assure them that it works very well. On the other hand, if they are younger or in a profession in which the sharpest possible vision is desirable, and they can tolerate more frequent visits and injections, they may prefer monotherapy.

## TREATMENT COURSE

Whatever decision is made, the first injection will be an anti-VEGF agent, preferably ranibizumab. For patients who opt for combination therapy, I bring them back 2 weeks later for the dexamethasone implant.

RVO patients' responses to combination therapy fall into two categories. There are "one-hit wonders" who do well with one combination treatment and do not need repeat injections or need them only at very long intervals, such as every 12 months. In others, the edema rebounds after 4 months and they need to be treated again. Interestingly, in the latter case, patients often return to the same good vision, if not better, after reinjection.

Elevation of IOP is also fairly constant after reinjections. In our series,[5] with multiple cycles of combination treatment, approximately 16% of patients experience IOP increase over 23 mm Hg at any time point.

We have noticed that, among our combined-therapy RVO patients, a greater percentage of those who receive ranibizumab have resolution of edema at 2 weeks than in those who receive bevacizumab (Avastin, Genentech). In this way, our experience in RVO mirrors the recently announced CATT trial in patients with age-related macular degeneration, in which reduction in central retinal thickness was greater in the monthly ranibizumab group than in the other groups.[6]

In some patients, laser may help break the cycle of recurrent edema. We will apply grid laser in some patients with BRVO, and we are also interested in whether targeted peripheral laser to ischemic areas may have a role in both BRVO and CRVO. This requires further study.

For patients who opt for combination therapy, we always give the combination: anti-VEGF agent plus dexamethasone implant. Some of our patients have had six and more cycles of combination therapy at 4-month intervals and are still doing well with no increase in side effects.

## CONCLUSION

With the wide diversity of lifestyles and preferences among our patients, we are lucky to have multiple pharmacologic regimens to offer for the treatment of RVO. By listening to patients and paying attention to their needs and desires, we can design a therapeutic regimen that best fits their needs and improves their quality of life to the greatest extent possible. ■

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